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AMC Pamphlet
AMCP 385-74

SAFETY DIGEST

NOVEMBER 1966

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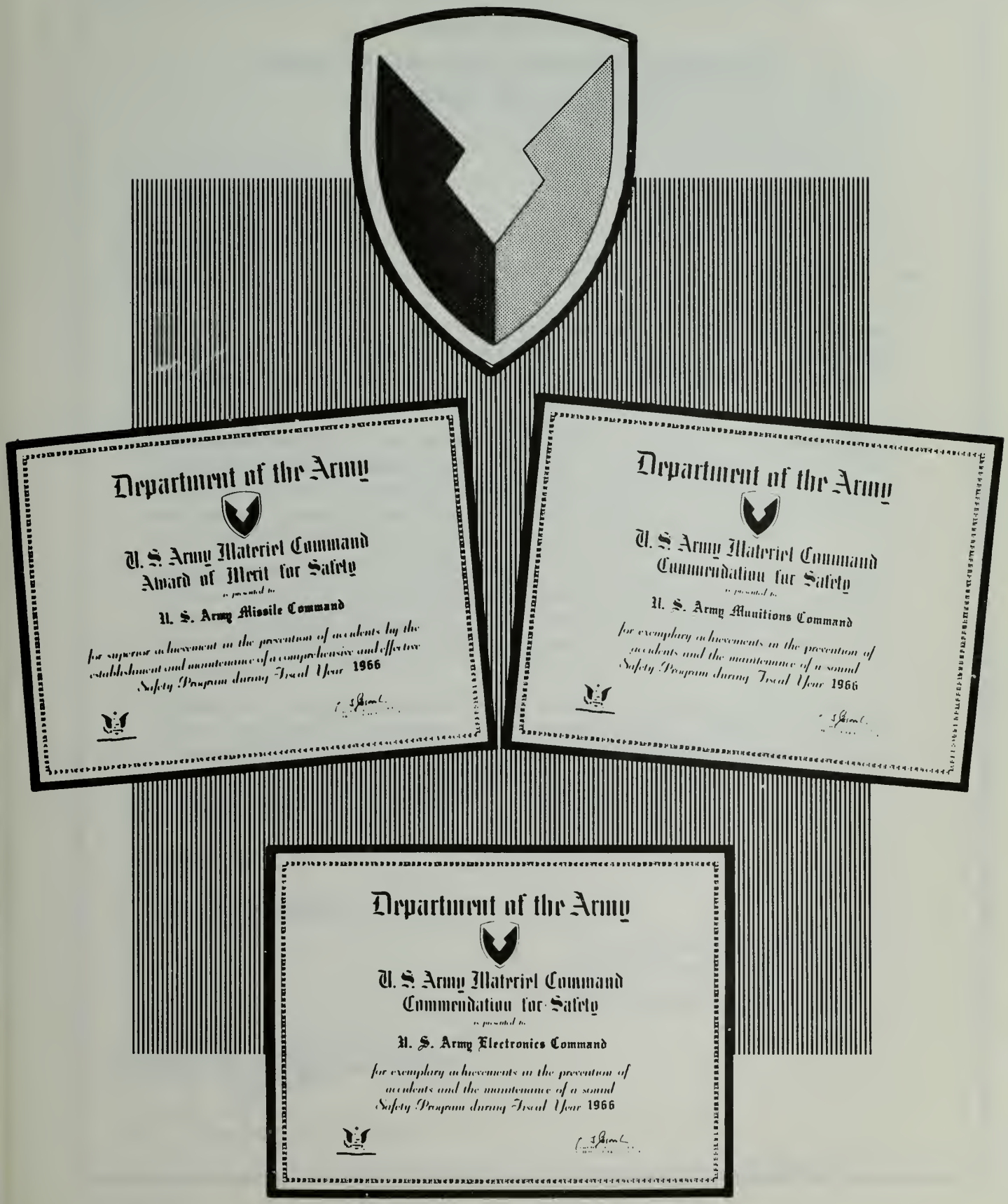
U. S. ARMY MATERIEL COMMAND

U. S. ARMY MATERIEL COMMAND
AWARD OF HONOR FOR SAFETY
AMC
SAFETY
PROGRAM
E PLURIBUS
UNUM
IN RESEARCH
IN PRODUCTION
IN STORAGE
IS PRESENTED TO
U. S. ARMY WEAPONS COMMAND
FOR THE BEST SAFETY PROGRAM OF
U. S. ARMY MATERIEL COMMAND
MAJOR SUBORDINATE COMMANDS
DURING FISCAL YEAR 1966


Department of the Army
U. S. Army Materiel Command
Award of Merit for Safety
U. S. Army Missile Command
for superior achievement in the prevention of accidents by the establishment and maintenance of a comprehensive and effective Safety Program during Fiscal Year 1966
Department of the Army
U. S. Army Materiel Command
Commendation for Safety
U. S. Army Munitions Command
for exemplary achievements in the prevention of accidents and the maintenance of a sound Safety Program during Fiscal Year 1966
Department of the Army
U. S. Army Materiel Command
Commendation for Safety
U. S. Army Electronics Command
for exemplary achievements in the prevention of accidents and the maintenance of a sound Safety Program during Fiscal Year 1966

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HEADQUARTERS
UNITED STATES ARMY MATERIEL COMMAND
WASHINGTON, D.C. 20315

AMC PAMPHLET
Number - 385-74 **November 1966**

The Safety Digest is an AMC Pamphlet prepared by the Safety Division, Headquarters, U. S. Army Materiel Command. Its purpose is to disseminate information which can materially influence and improve safety programs at all Command establishments.

Articles are included to supplement technical knowledge as well as practical knowledge gained through experience. They provide a basis for the further refinement of safety measures already incorporated in operating procedures and process layout. To achieve maximum effectiveness, the Safety Digest should be given widespread circulation at each AMC establishment.

Articles appearing in the Safety Digest are unclassified and are not copyrighted. They may be reproduced as desired in order to bring pertinent accident prevention information to the attention of all employees. The Army Materiel Command Safety Digest should be given a credit line when articles are extracted.

Unclassified material believed to be of interest or benefit to other establishments is welcome for publication in the Safety Digest. Please send articles for review to: U. S. Army Materiel Command Field Safety Agency, Charlestown, Indiana. If possible, include pictures, charts, drawings, and illustrations that clarify and heighten interest in your presentation.

(AMCAD-S)

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SD U. S. ARMY MATERIEL COMMAND SAFETY AWARDS FOR FY 1966

The following U.S. Army Materiel Command Subordinate Commands, installations, and activities have won AMC safety awards. Personnel of these elements are congratulated for their contributions to the U.S. Army Materiel Command Safety Program.

• GROUP 1

MAJOR SUBORDINATE COMMANDS

Award of Honor

	Point Score
U.S. Army Weapons Command	97.40

Awards of Merit

U.S. Army Supply and Maintenance Command	93.15
U.S. Army Missile Command	87.87

Commendations for Safety

U.S. Army Munitions Command
U.S. Army Electronics Command

• GROUP 2

INSTALLATIONS AND ACTIVITIES REPORTING DIRECT TO HEADQUARTERS, U.S. ARMY MATERIEL COMMAND

Award of Honor

Harry Diamond Laboratories	90.75

Awards of Merit

U.S. Army Logistics Management Center	87.60
U.S. Army Satellite Communications Agency	85.25
U.S. Army Cold Regions R-E Laboratories	84.50
U.S. Army Nuclear Defense Laboratory	84.35
U.S. Army Ballistic Research Laboratories	81.91
U.S. Army Materials Research Agency	79.25

Commendations for Safety

Point Score

U.S. Army Cincinnati Procurement Detachment
U.S. Army Foreign Science and Technology Center
U.S. Army Major Item Data Agency
U.S. Army New York Procurement Detachment

• GROUP 3

INSTALLATIONS AND ACTIVITIES REPORTING DIRECTLY TO U.S. ARMY SUPPLY AND MAINTENANCE COMMAND

Award of Honor

New Cumberland Army Depot	98.00

Awards of Merit

Savanna Army Depot	97.50
Red River Army Depot	93.05
Sierra Army Depot	88.60
Letterkenny Army Depot	88.10
Schenectady Army Depot	87.60
Lexington-Blue Grass Army Depot	87.60

Commendations for Safety

Umatilla Army Depot
Anniston Army Depot
Atlanta Army Depot
Granite City Army Depot
U.S. Army Area Support Command, Chicago
U.S. Army Support Center, Philadelphia
U.S. Army Maintenance Board
U.S. Army Petroleum Center

• GROUP 4

INSTALLATIONS AND ACTIVITIES REPORTING DIRECTLY TO U.S. ARMY MUNITIONS COMMAND

Award of Honor

Louisiana Army Ammunition Plant	94.45

Awards of Merit

	Point Score
St. Louis Army Ammunition Plant	85.00
Lake City Army Ammunition Plant	84.50
Longhorn Army Ammunition Plant	83.00
Milan Army Ammunition Plant	80.15
U.S. Army Ammunition Procurement and Supply Agency	79.60
Twin Cities Army Ammunition Plant	78.15

Commendations for Safety

Badger Army Ammunition Plant
Lone Star Army Ammunition Plant

• GROUP 5

INSTALLATIONS AND ACTIVITIES REPORTING DIRECTLY TO U.S. ARMY WEAPONS COMMAND, U.S. ARMY MISSILE COMMAND AND U.S. ARMY TEST AND EVALUATION COMMAND

Award of Honor

Thiokol Chemical Corporation, Huntsville Division	96.58

Awards of Merit

Watervliet Arsenal	95.30
Jefferson Proving Ground	94.35
U.S. Army General Equipment Test Activity	94.15
Springfield Armory	91.56
Charlotte Army Missile Plant	91.00
Rock Island Arsenal	86.60

• GROUP 6

INSTALLATIONS AND ACTIVITIES REPORTING DIRECTLY TO U.S. ARMY MOBILITY COMMAND AND U.S. ARMY ELECTRONICS COMMAND

Award of Honor

U.S. Army Aviation Materiel Laboratories	97.70

Awards of Merit

Lima Army Modification Center	97.00
Director of Procurement and Production (ECOM)	96.10
U.S. Army Mobility Equipment Center	88.30
Michigan Army Missile Plant	87.10
Director of Materiel Readiness (ECOM)	85.30

CALCULATED RISKS

Probably the most overworked, the most deceptive, and the least understood words heard in discussions involving safety are, "Calculated Risk." Quite frequently, this combination of words is also given as the abstract answer to many of the everyday problems in safety. Each of the two words has a definite meaning in itself; used in combination and applied to the problems we are accustomed to, however, they usually reveal a rather confused state of affairs, both in the mind of the person using them and the particular situation to which they are hopefully applied.

It is true that safety is a relative condition. Nothing we undertake to do is absolutely safe, including life itself. If we are intelligent, however, we endeavor to make our way and the way of others as safe as possible. Because we are human and have our shortcomings, emergencies do arise which may prompt us to take a known risk, but in such cases the risk, generally, is not "calculated," since we neither have the time to "calculate" nor do we have any idea of the "odds." It will be apparent, since safety is a relative thing, that we are obliged to accept something less than the absolute degree; and this is as it should be. We must approach with caution, however, that proneness to solve each difficult problem with the words "an acceptable calculated risk" unless the situation has really been evaluated.

As a matter of interst, let us examine rather closely the statment "I'll take the calculated risk." In more than a few cases, it becomes fairly obvious from questioning the individual making the statement, that no calculations, mental or otherwise, ever were made; in fact, it is not unusual to discover that there isn't the vaguest notion of whether the chance for an incident is one in a hundred or one in a million. Neither is it unusual to find that the phrase "I'll take the calculated risk" does not involve directly the individual using it since the "risk" that will be taken is often shouldered by some workman on the line. Since the "risk" under discussion is normally not calculated, and since the individual making the assertion, "I'll take the calculated risk" only in rare instances expects to be physically exposed, it appears fairly obvious that there is some carelessness with the truth in the matter of "who is risking what."

For the day-to-day safety problems, excluding the combat officers' responsibility to fight beside his men under conditions providing the least risk, it would appear from past history that the assertion, "I'll take the calculated risk" is quite often meaningless in the technical sense. When

decisions are to be made in safety where "chance" is a predominant factor, it is proper that we be truthful in the matter. It follows, therefore, that we identify a willingness to "accept chance" in its correct perspective rather than attempt to magnify in importance the action with the words, "Calculated Risk." In addition, it appears reasonable to suggest that, in the future, "Gamble No Lives But Your Own."

* * *

LOUISIANA ARMY AMMUNITION PLANT RECEIVES NSC AWARD OF HONOR

The Louisiana Army Ammunition Plant received an Award of Honor from the National Safety Council for operating 4,842,641 manhours without a disabling injury. This record period was from 20 March 1964 to 31 December 1965. In July 1966, when the award was presented, the installation passed the 7,000,000 manhours mark without a lost-time injury. Mr. Joe Harris, Vice-President of the Ark-La-Tex Chapter, American Society of Safety Engineers, is shown presenting the award to Major Joseph T. McGuffie, Commanding Officer, and Mr. T. L. Gaines, General Manager. Mr. J. M. Richardson, contractor's safety director, and Mr. Arthur H. Gilbert, Army safety officer, stand at the left and right in the front row. Members of the Central Safety Board are shown in the background.

Louisiana Army Ammunition Plant is operated by the Remington Office Equipment Division of Sperry Rand Corporation.

ETHICS FOR THE SAFETY OFFICE

Thomas P. Browne, Safety Director
1st Logistical Command, Saigon, Vietnam*

Regardless of how hard the attempt, a safety office should not expect to attain its accident prevention goals unless its actions are governed by ethical as well as technical principles.

● Principles practiced by the safety office should provide for the following:

1. Respect for the honor and dignity of the safety profession.

2. Honest, objective, and complete consideration of problems for the purpose of attaining the soundest possible solutions.

3. Loyalty to those in command.

4. Full use of all available knowledge and skills for the advancement of the safety program.

● When dealing with other organizational units and their personnel the principles practiced should include:

1. An equal regard must exist for the safety, health, and welfare of all employees, with no qualifications as to position, rank, or association.

2. Accident prevention facts should be presented as such and fully substantiated. When opinions are advanced, supporting and non-supporting evidence should be exhibited.

3. Recognition should be given technical and operational limitations.

4. Full credit should be given to those who provide assistance in solving problems.

● At times the safety office will deal with persons or groups outside the organization. Opportunities and responsibilities arise that demand the best of safety personnel.

1. Every legitimate opportunity should be used to broaden the public knowledge and appreciation of safety work, and to oppose untrue, unsupported, or exaggerated statements and concepts.

2. Full recognition should be given to the work of others to attain safety goals. The professional safety worker has no monopoly on the knowledge and skills of his field. Supervisors who strive for the safety of their personnel and operations far outnumber professional safety personnel. A good safety record reflects their efforts and that of the people they supervise. Any sincere efforts to attain safety should never be derided.

3. Cooperation, to the greatest practicable extent, should be provided in exchanging information that will advance accident prevention.

Too little confidence will be placed in the most valid of accident prevention recommendations if the offering individual or office lacks integrity. Concealing or distorting information on accident experience in order to make a record look good deserves and earns distrust. The safety office will do a better job of helping prevent accidents when the high principles practiced by its personnel earn respect and confidence.

*Formerly of U.S. Army Missile Support Command

* * *

A WINTER DRIVING REMINDER

Earlier this year Lt General Train, Commanding General, First United States Army, Fort Meade, wrote a letter to his personnel on the hazards of bad weather driving. With the arrival of winter and its frequently poor road and visibility conditions, the following quotat from the letter is timely:

> "Bad driving weather is often the excuse, but rarely the real cause, of traffic mishaps. Failure to adjust sensibly to the dangers of slippery road surfaces, and failure to recognize the shortcomings of other drivers, increase the probability of serious accidents. No matter how careful an operator may be, the road is shared with many drivers who may not know, or may not observe, the driving and speed adjustments necessary to cope safely with bad driving conditions."

FIRE FIGHTING AND PREVENTION SERVICES

Recent AMC fire experience indicates a need to re-emphasize, and supplement fire fighting and prevention policies and procedures in AR 420-90, and AMCR's 420-2, 420-3, 420-4, 420-5, and 385-4. Pending revision of AMC regulations the following was furnished for information and implementation by AMCIS letter, above title, dated 11 August 1966:

1. To increase command supervision of fire fighting operations, the military Fire Marshal (Post Engineer) should reside on-post, or an on-post Deputy Fire Marshal should be designated.

2. Fire rescue training for fire department personnel will be given high priority; and periodic and scheduled training will be accomplished. Training will encompass to the fullest extent, unit training as well as individual training and will stress supervisory responsibilities.

3. In accordance with AR 420-90 and paragraph 1221, AMCR 385-224, procedures will be established to immediately request the support of city or other governmental subdivision fire departments for all fire fighting operations.

4. In accordance with AR 420-90, an Auxiliary Fire Force will be organized and trained and will be available at all times to assist in fire fighting operations.

5. For on-post family quarters fire prevention:

a. Periodic fire prevention inspections will be conducted by qualified personnel; and timely correction of potential fire hazards will be accomplished.

b. Immediately after a fire in a family quarters has been extinguished, a thorough inspection will be conducted to determine the cause of the fire and identify potential fire hazards, followed by immediate corrective actions.

c. The installation Family Housing Manager should be required to provide appropriate assistance to the Fire Marshal, such as:

(1) Assist the installation Fire Chief in the preparation of a Fire Prevention SOP for Family Housing.

(2) Distribute the Fire Prevention SOP to responsible occupants of family quarters.

(3) Assist in fire prevention training and enforcement of the fire prevention program.

6. Smoking will be prohibited or controlled in hazardous areas, to include forest areas during periods of potential forest fires.

7. The use of open flames, such as from welding and cutting torches, in any building except approved shop areas, will be prohibited unless approval is obtained from the Fire Marshal and arrangements are made for inspections by a representative of the Fire Department upon completion of each work shift. This is in addition to the related requirement specified by paragraph 1606, AMCR 385-224.

8. Alarms will be installed as a component of all fire protection sprinkler systems, so that an alarm is sounded in the building and at the Fire Department when a sprinkler system is activated.

9. Fire reports (DA Form 5-2) will be prepared in accordance with paragraph 4 of AMCR 385-4. Supplemental information will be provided in the form of technical investigation reports as specified in paragraph 5 of AMCR 385-4, for all fires involving $100 or more damage. In addition, furnish specific information on actions taken or to be taken to prevent future fires from like causes.

10. It is requested that current fire fighting and prevention practices be evaluated at each AMC installation and that necessary actions be taken to implement the above policies and procedures.

* * *

NATIONAL SAFETY COUNCIL AWARD NOTIFICATIONS

Harry Diamond Laboratories was awarded the NSC Award of Honor for operating 3,028,992 manhours without a disabling injury from 15 June 1965 to 11 July 1966.

Erie Army Depot also qualified for a NSC Award of Honor. The Depot operated 3,329,000 manhours without a disabling injury from 16 February 1966 to 30 June 1966.

FIRE PREVENTION

The need for fire prevention is always with us but we are more conscious of that need NOW because --

1. It is the time of year when construction forces are in the peak of their work period and using tremendous quantities of combustible fuels.

2. It is the time of year when woods and grasses are dry and ready to burst into flames from the smallest spark.

3. It is the time of year when days are shorter and we use more electricity for lighting and heating.

4. It is the time of year when the weather is turning colder and we have the need for heat, at work and in our homes.

5. It is the time of year when FIRE becomes a greater necessity. As such it can be and is one of man's best friends. BUT - it can also be one of the most devastating forces of destruction to human life and property.

YES - last year (1965) 8,172 persons died from fire or burns resulting from fire, and the property loss was the unbelievable sum of $1,367,000,000.00.

FIRE is a willing and able servant. Let's keep it so. Now as we recognize the increased need for its use, let's take action to keep it IN ITS PLACE.

Make it a point to survey your work area for any possible fire hazards now. Take tips home to your family on how to prevent home fires. Explain how faulty equipment, careles smoking, and excess trash can be a fire hazard. Tell them what to do in case of fire and how to get out fast. Let's share our safety experience so that we can keep our families, as well as our fellow employees, safe too.

- SAFETY SPEAKS
U.S. Army Engineer
District,
Vicksburg

FIREPROOFING CHRISTMAS TREES

Harry A. Porter, Safety Engineer
Picatinny Arsenal

The National Safety Council announced in 1964 that flameproofing of evergreen Christmas trees with borax and boric acid solutions is not effective in preventing trees from burning. On the strength of this information the Safety Division at Picatinny Arsenal conducted extensive tests on Christmas trees which substantiated this claim.

Christmas trees were procured for conducting these tests. One tree was not treated in order to make comparisons. Another tree was thoroughly sprayed with the borax and boric acid solution that had been used at the Arsenal for some years. Still another tree was sprayed with CM, which is the solution used to treat powder uniforms for flame resistance. The fourth tree was placed into a pail of water.

All of these trees were then placed in a heated basement of an inert building and left there for approximately 10 days. They were then taken to the inert burning ground and set on fire individually.

The untreated tree burned fiercely.

The tree treated with the borax and boric acid solution burned about the same as the untreated tree.

The trees treated with CM burned similarly.

The tree which had been kept in water also burned but not as fast as any of the others.

On the basis of these tests, Picatinny Arsenal policy was established that either Underwriters' Laboratories approved artificial trees be used or where natural evergreen trees are used they shall be kept in water-wet sand.

During 1965, literature was received by Picatinny Arsenal advertising a flameproofing material called "California Official No. 8 Clear." One gallon of this material was obtained and tests were conducted on some evergreen boughs. Although the boughs were rendered flame retardant, the green color disappeared in a short time and the needles adhered to each other, making the boughs unsightly. Aside from the disappearance of the color and unsightliness, it was determined that the cost of treating all trees used on this Arsenal would be prohibitive. Therefore no change was made in the previously established policy on Christmas trees.

NEW FLIGHT HELMET PROTECTS ARMY FLIERS

A new flight helmet provides Army fliers and crews significantly increased protection against crash and ballistic hazards. The headgear was developed by the Natick Laboratories of the U.S. Army Materiel Command.

The helmet is constructed of a laminated nylon fabric and is lined with one-half inch thick energy absorbing, crushable foamed polystyrene plastic. It provides about four times more impact protection and 50 percent more ballistic fragment penetration protection than the flight helmet it replaces.

A new shatterproof plastic visor, attached to the helmet, is expected to reduce the possibility of injury to the eyes. The visor is made of polycarbonate resin and can be attached to all Army flight helmets now in use or stock.

COOLING BLANKET ADDED TO AMC SAFETY EQUIPMENT EXHIBIT

A cooling blanket that is useful in emergency treatment of serious burns is a recent addition to the AMC Safety Equipment Exhibit, located at AMC Field Safety Agency, Charlestown, Indiana. The blanket is packed ready for use in a container, shown in the top background of the picture, and can be handled by one or two persons. It is energized by a pull that releases a divider and permits a chemical reaction of the contents. The blanket cools to 29° Farenheit and holds its cold temperature for 4 hours. It helps prevent shock, withdraws heat from affected areas, and retards continued burning of body tissue. The blanket covers the entire body, and may be used as a cold pack for trauma, broken bones, dislocations, and swelling.

CHEMICAL SAFETY FOR THE AVERAGE PERSON

J. F. Harbarger, Manager, Safety
Thiokol Chemical Corporation, Huntsville Division

Chemistry is so basic to modern civilization that everyone has absorbed a certain amount of chemical knowledge without recognizing it as such. We do not think of the wood burning in the fireplace and giving off heat and light as the chemical reaction of the carbon in wood combining with the oxygen of the air. We learned early in life that if we "damper down" a coal stove so that it almost "smothers," it is likely to give off deadly gas commonly called "coal gas." Without a thorough knowledge of chemistry, we know that the fumes from a gasoline engine running in a closed garage will cause death.

Chemistry touches our everyday life; our clothes are bleached with chemicals; we shower with a highly refined chemical soap; our drinking water is chemically treated; our foods are chemically treated to preserve or enhance flavor. Almost every article we use or work with, even the floors we walk on, are wholly or in part chemical in nature or fashioned as a result of chemcial processes.

Most industrial processes involve chemistry in one form or another, and a basic knowledge of the fundamentals of chemistry is a prerequisite to insure the safety of all.

A compound results when a chemical reaction takes place as a result of mixing two or more elements. The number of compounds that could theoretically be formed from the known elements is practically limitless.

In industrial operations we are concerned with these reactions. Chemicals may change from solid to liquid to gaseous in many processes. The degree of changing from one state to another (liquid to gas) has marked safety implications. Unless known to be inert all compounds in explosive operations should be treated as hazardous. Unless specifically instructed by qualified personnel, operators should never handle or mix substances whose properties and reactions are unknown to them.

Vapor, dust, fume, and mist are matter that is given off in industrial chemical handling or work processes. If toxic, they create a hazard to breathing and if combustible a fire and explosion hazard. Every effort is made to control this hazard at the source. Personal protection should be utilized by personnel when hazardous dust or gases are in existence. Personal protective equipment must be utilized where prescribed.

Professional chemists and chemical engineers learn to respect materials through a thorough understanding of the hazards presented. The average person may be on guard against chemical hazards by following these fundamental rules regarding the handling of chemicals:

1. Learn as much as you can about the nature of the chemical (liquid, solid, or gaseous) that you encounter in your job.

2. Do not guess if you do not know of the hazards present with certain chemicals. Ask someone who is qualified to know.

3. Label unlabeled containers if contents are known. Containers with undetermined contents should be destroyed.

4. Do not operate equipment if devices designed to control vapor or dust hazards are defective.

5. Wear protective equipment where designated and avoid body contact with chemicals.

6. Clean chemicals from body after contact.

7. Keep heat sources (friction, impact, combustion, and electricity) away from flammable materials -- solid, liquid, or gaseous.

8. Use chemicals properly.

9. Read container labels.

10. Follow SOP's to the letter. They were established by someone who knows.

CLIMBED, REACHED, FELL, FRACTURED, BURNED

A contractor's instrument technician found he needed to add water, a softener, and detergent to an elevated water supply tank. He poured his chemicals, dissolved in hot water, into a bucket, and set a 5-foot stepladder in place below the tank. He climbed up, bucket in hand.

To reach the top of the tank the worker had to climb almost to the top step. This left him with little of the ladder to use as a prop for any part of his body. Both hands were required to manage the pouring operation. Still he felt he could manage to pour the solution into the tank.

He braced himself as best he could on the ladder and reached out toward the tank, with both hands on his bucket of hot liquid. He overreached. With his footing insecure and both hands on the heavy bucket, he had no way to recover his balance. He fell to the floor, nearly 5 feet below, with the hot liquid pouring down and splashing upon him.

His injuries due solely to the fall included a twisted right ankle and a fractured bone in the heel. The hot liquid produced second and third degree burns on his upper right forearm, his right ear and temple area, and on a large area of the upper right shoulder.

The installation issued a work order for the installation of a work platform to prevent the use of stepladders when supply tanks were serviced.

PIN PULLED - BANG FOLLOWED

Part of a surveillance program involved the rework of a shipment of aircraft canopy removers. These were propellant actuated devices equipped with locking pins and safety pins to permit safe handling. Both pins were required to be in place before the remover was shipped from the field. Some were received with nails, wire, bobby pins, or hairpins substituted for the approved type of cotter pin or safety pin. Occasionally an item was received without a locking pin or a substitute for it.

An employee was assigned the task of manually extracting the safety pins from the canopy removers and separating their inside tube assemblies from them. He had been instructed to follow a standing operating procedure. He was to make certain a locking pin or a substitute was in place before he removed a safety pin.

The worker held a canopy remover assembly in his left hand and used a pair of pliers in his right hand to extract the safety pin. He extracted pins from 370 of the items. The next unit functioned. The fired tube separated from the assembly, grazed the left side of the man's head in flight and embedded itself in the ceiling. The worker received a laceration wound on the left temple that caused him to be hospitalized for treatment and away from work for 6 days.

To prevent similar accidents the installation set up a procedure for inspection personnel to inspect all propellant actuated devices received for rework. The inspector would make certain that adequate locking pins and safety pins were in the proper position before the disassembly operation began.

The practice of holding the propellant actuated devices by hand while pins were extracted was discontinued. Under a new procedure the pins were removed inside a barricaded fixture that was equipped with an operational shield.

LOOK OUT BEHIND !

It was "open house" day and conducted tours were being staged to show the visitors various work areas and operations. A part of the trip consisted of a train ride on the installation's railroad system. Seats on a flat car were provided for passengers.

The train approached a building where there would be a narrow clearance between the wall and the car. The brakeman was aware that some passenger intent on seeing everything might have extended his head, arm, or a leg over the edge of the flatcar. He turned to warn them of the hazard.

To make certain that no passenger had exposed himself, the brakeman leaned over the edge of the car to check. At that instant the forward end of the car reached the building. His head struck the wall. He fell to the roadbed between the train and the building. The blow produced a skull fracture and an estimated disability period of 4 weeks.

The installation's rail operating personnel were given fresh instructions on the proper safety precaution to be taken while operating their equipment. Their supervisors were instructed to maintain closer supervision to make certain that safe procedures were practiced.

BATTERY BOOSTING LEADS TO EXPLOSION

On an autumn evening an enlisted man discovered that his private automobile, parked on a post parking lot, would not start. He identified the trouble as a weak battery, and he decided to use a jumper cable to secure the power needed to start the motor.

Before he attached the cable to his battery, he removed two of its three caps. The third cap was broken and he left it in place. He then attached the cable clamps first to the 6-volt battery of his car and next to the 12-volt battery of the second vehicle. He tried the starter and the motor started.

The soldier left the motor running and disconnected the booster cable clamps. The motor stopped. He examined the battery again and discovered a small fire coming from it. At this moment the battery exploded and splashed acid into his eyes. Burns to both eyes required 4 days treatment in a hospital.

Corrective action at the installation included instructions in the proper use of booster cables whenever circumstances prevent the preferred method of replacing the frozen or dead battery with one that is fully charged. This "Battery Booster Procedure" was published in the May 1965 issue of the Safety Digest, AMC Pamphlet 385-65.

CONTRACTOR EMPLOYEE THINKS OF SAFETY

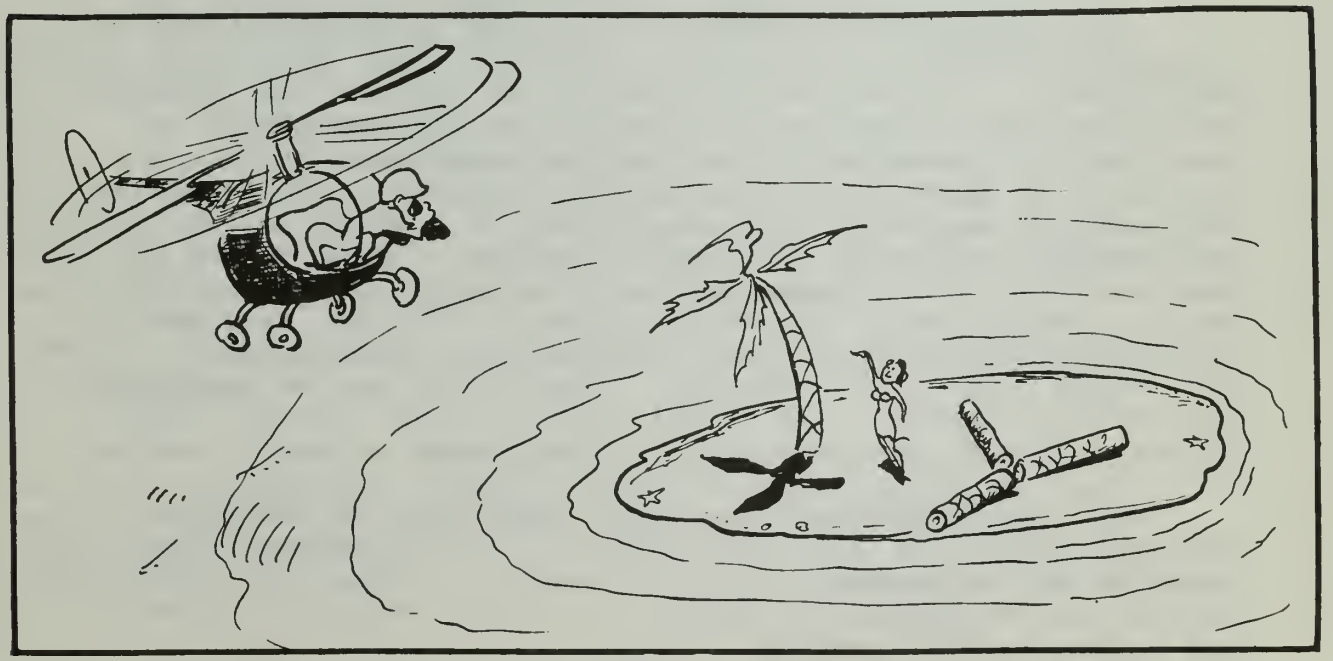
As do all of the Thiokol Chemical Corporation, Huntsville Division's personnel, J. K. Edmondson, Research and Development Department, thought of his safety program while visiting Thiokol's Wasatch Division recently. He saw the International Ground to Air Emergency Code in their weekly Bulletin and brought it back with the thought that it would be a good thing for the installation flyers, boat enthusiasts, scouters, travelers, and campers to know. Here it is:

INTERNATIONAL GROUND TO AIR EMERGENCY CODE

I DOCTOR REQUIRED, SERIOUS INJURIES	WILL ATTEMPT TAKEOFF
II MEDICAL SUPPLIES REQUIRED	AIRCRAFT SERIOUSLY DAMAGED
X UNABLE TO PROCEED	PROBABLY SAFE TO LAND HERE
F FOOD AND WATER REQUIRED	L FUEL AND OIL REQUIRED
FIREARMS AND AMMUNITION REQUIRED	ALL WELL
COMPASS AND MAP REQUIRED	N NO
SIGNAL LAMP WITH BATTERY AND RADIO REQUIRED	Y YES
K INDICATE DIRECTION TO PROCEED	MESSAGE NOT UNDERSTOOD
AM PROCEEDING IN THIS DIRECTION	W ENGINEER REQUIRED

SIGNALS SHOULD BE 10 FT HIGH WITH 10 FT INTERVALS BETWEEN EACH.

International Ground to Air Emergency Code---The wallet size copy of the International Ground to Air Emergency Code is presented for the information of all employees; and especially those whose interests take them to remote regions. The signals, very easy to construct of available materials or long strips of cloth (yellow is most visible from the air), are designed for use in signaling rescue aircraft. (Card form suggestion submitted by Frank Pledger, Physical Security, Thiokol Chemical Corporation.)



TECOM MAN HONORED FOR SELF-DEVELOPMENT

Phillip M. Edwards, health physicist in Headquarters, U.S. Army Test and Evaluation Command, was recently honored by the Deputy Commanding General, Brigadier General John K. Boles, Jr., on successfully completing the Special Extension Course in Safety Management. In presenting the certificate of course completion, General Boles noted that Mr. Edwards had also been commended by the commandant of the Adjutant General School, the Army Director of Safety, and the Chief of Staff, Army Materiel Command.

Mr. Edwards was recruited into civil service in 1964 as a health physicist from private industry. His duties in TECOM Safety Division were primarily to oversee the command's radiation protection program, but he became interested in other safety areas and in the Safety Management Career Program. He immediately started an intensive self-development program to better qualify himself for other safety assignments and possibly a safety career. Since he had no previous Army safety experience, he enrolled in the Adjutant General School basic extension course for Safety Management. Working on his own time, he completed this prerequisite course, 230 credit hours, in 14 months. Continuing on, he completed the advanced course, 236 credit hours, within another eight months. In all, he completed 33 subcourses within 22 months.

Mr. Edwards became the first individual to complete both the Basic and Advanced levels of this extension course. Based on his extension work, on-the-job training and experience, he was able to apply for registration as a Safety Officer in the safety career program.

SAFETY HINTS FOR MOTORCYCLISTS

Motorcycles are here to stay despite the frequency and the severity of the accidents in which they become involved. Each year more cyclists take to the highways.

The American Motorcycle Association has offered the following suggestions that should help make motorcycling safer:

1. Cyclists are urged to wear safety helmets, leather clothing, and protective footgear.

2. Check all controls before starting the engine. After starting allow the engine sufficient time to warm up. The misfire of a cold engine at an inappropriate time can put the rider in serious trouble.

3. Always apply the rear brake first; then ease down gently on the front brake. Brake gradually on slippery surfaces, and remember to brake before rounding turns, not while on them.

4. Both thinking distance (the distance traveled during the time it takes for a driver to react to a situation) and braking distance (the distance traveled after application of the brakes) must be considered in a stopping situation. At 50 mph, 50 feet of thinking distance and 125 feet of braking distance, a total of 175 feet, are needed to come to a stop.

5. Pass other vehicles only when the road ahead is clear. After passing, don't cut back into the right-hand lane too sharply.

6. When planning a left-hand turn, enter the appropriate turn lane well in advance of the intersection. Insure that you are visible in the rearview mirrors of the cars up front. Be alert for the motorist who might turn suddenly in front of you, or even make an improper, unsignaled turn from the opposite lane of traffic.

7. Make turns at moderate speeds to minimize centrifugal force.

8. Come to a complete stop before making a U-turn and look completely around for any possible oncoming traffic. Make the turn, but only after checking once again for approaching traffic.

Thiokol Chemical Corporation

Longhorn Division

MACHINE GUARDS PLUS COMMON SENSE EQUAL SAFETY

A contractor employee at an AMC installation turned on the motor of a mix chamber. The machine failed to function. The worker left the motor switched to the "On" position and reached under the guard to pull the belt. His pull started the motor, and the moving belt pinned his hand against a pulley. Part of his thumb was amputated.

Army employees at another AMC installation were operating a 12-inch jointer. Rough, heavy timbers were passed over the machine to prepare them for ripping to a required width. Twenty minutes after he had given instructions and started the operation, the shop foreman turned away to check on another machine. One of the workers feeding a timber into the jointer then pushed back the machine guard. Within seconds his right hand came into contact with the machine's knives and the end of the middle finger on his right hand was cut off.

Much ingenuity, effort, and expense have been required to get adequate guards on machines. Accidents such as these show how easy it is for the safety they provide to be nullified by an individual's failure to make use of them.

Here are a few common sense rules about guards that will help them provide the safety they were designed to furnish machine operators:

1. Remember that guards have been installed for your safety. They prevent injuries when used as they are intended to be used.

2. Do not tamper with guards. Any adjustments or changes may cause another person to have an accident.

3. If a guard is defective or is not working just right, report it to the supervisor.

4. Check all guards before you start your work.

5. If you have to remove a guard to make repairs, clean, or adjust equipment, be sure the power is shut off and will not be turned on again until you are through. Lock the switchbox or post another person at it to make sure.

6. Be sure that guards and safety devices have been replaced properly before the repaired, cleaned, or adjusted equipment is returned to use.

7. If you can think of a better guard, or a way to improve the ones on your machine, discuss it with your supervisor. Some of the best guards are designed or suggested by men on the job.

8. Machine guards plus common sense are needed to keep you safe.

VVVV

THE EXTRA GAS CAN

On a warm day, two safety experts placed a safety can full of gasoline in the trunk of a car, moved to a safe distance, leaving the engine running, and waited. Within 20 minutes the entire back of the car exploded.

Why? The safety container is designed to breathe and as the trunk became warmer, the gasoline generated enough pressure to force vapours out past the cap. In a compartment, the vapours would ultimately reach explosive proportions which would need only some ignition source -- a defect in the ignition or a short in the tail light circuit -- to touch off an explosion.

If you carry extra gasoline in your car, use only a container listed by a recognized testing authority, put it in the back seat of the car, and keep the windows open. Keep the can in the car as short a time as possible. Carrying a spare can regularly is dangerous.

Reprinted from Industrial Accident Prevention Association, April 1966.

KEEP YOUR EYE ON YOUR TIRES

Safety Division
U.S. Army Missile Support Command

Almost any late model car today can achieve speeds of 70-90 miles per hour. Modern turnpikes and freeways permit you to drive at higher speeds for long distances. Sustained high speed driving can drastically reduce tire mileage and, unless care is exercised, result in sudden, dangerous tire failure.

You can obtain all of the trouble-free mileage built into your tires only if you give them proper care. The following "tips" on proper tire care, if you use them, will result in better tire performance, will save you money -- and maybe your life.

Proper tire care makes driving safer, car operation more efficient. Follow these five simple rules to prevent costly inflation failures.

1. Make sure tires are kept inflated to recommended pressure. Check regularly. (Inflate tires only when cool.)

2. See that valve caps are kept screwed on finger-tight.

3. Never try an old valve core to do the job. Replace with a new one.

4. Check for slow leaks whenever air pressure shows a decided drop. Have slow leaks repaired at once.

5. It is normal for tires to "build up" a few pounds of air pressure after being run. Do not reduce (bleed) this pressure. Bleeding of tires causes excessive flexing of the sidewalls and results in abnormally high internal tire temperatures. Furthermore, when tires cool off, they will be badly underinflated.

When you anticipate driving at sustained speeds, increase the tire pressure in your tires four pounds above the recommended cold starting pressure. High speed causes dangerous distortion in tires. It becomes more severe in overloaded or underinflated tires. The tread becomes stretched and distorted. Excessive heat builds up in the tire. This, if prolonged, may cause tire to come apart. Continuous excessive high speeds cut tire life in half.

Out-of-balance wheel assemblies ruin tires. An assembly which is out of balance will develop sledge-hammer blows at 60 miles per hour. There are two main symptoms of out of balance:

1. "Tramp" or road shock is felt through the steering wheel as vibration increases with speed.

2. "Shimmy" is a rapid side movement of front wheels which usually is apparent in sidewise vibration of the front end.

Mechanical irregularities contribute to uneven, rapid tire wear. Primarily these are:

1. Excessive camber, wheels tilted inward or outward, causes rapid wear on one side of tires.

2. Excessive toe-in or toe-out of wheels results in tires with feathered edge and excessive wear.

3. Faulty or grabbing brakes cause much the same symptoms as out-of-balance wheels, flat spots, and bald spots.

4. Faulty or worn shock absorbers cause irregular tire wear and lead to other mechanical irregularities.

The service that tires deliver is largely in the hands of the driver. Good drivers follow these tire-saving practices.

1. Use correct air pressure.

2. Do not overload.

3. Do not drive over curbs, chuck-holes, or other obstructions.

4. Avoid riding edge of pavement.

5. Avoid speeding over rough roads and round curves.

6. Drive at moderate speeds.

7. Avoid fast stops and starts.

8. Inspect tires regularly.

9. Rotate tires on car at regular intervals.

To sum up, listed below are things to remember:

1. Have your brakes adjusted regularly.

2. Have your shock absorbers checked.

3. Use the proper size tires for your car.

4. Do not overload your vehicle.

5. Do not start and stop quickly.

6. Keep oil and grease off tires.

7. Give tires a rest once in a while on long trips.

8. Avoid hitting sharp objects.

9. Tire failure is the major cause in expressway accidents.

10. A two-ton car has only 125 square inches of tire surface in contact with the road.

11. If you drive five minutes at 100 miles per hour, you can fry an egg on your tire.

SAFE HOLIDAY DRIVING

.... IS THE CORRECT ANSWER.

REACTIVATION AND MAINTENANCE OF EXPLOSIVES EQUIPMENT

Safety Office
Aberdeen Proving Ground

Just one mistake during reactivation and maintenance operations where explosives are handled can destroy a key operation or building. It may put the whole program in a state of confusion or bring it to a full stop.

That is the spot installation safety personnel are on every day of the year, and particularly during any reactivation or maintenance period. For this reason, we are reminding you of some of the hazards which are too often taken for granted or overlooked:

1. Using explosives processing equipment not known to have been contaminated or considered to have been previously decontaminated.

2. Using flame producing devices on explosives processing equipment or in hazardous locations.

3. Using unauthorized tools and equipment.

4. Inadequate knowledge of the equipment or the operation involved.

5. Lack of planning.

6. Incomplete and erroneous standing operating procedures.

7. Inadequate training of personnel.

8. Improper instructions to personnel.

9. Lack of follow-up.

10. Utilizing short cuts to get the job done.

11. Lack of interdepartmental coordination.

Few employees are exposed to greater or more varied hazards than the maintenance or set-up men assigned to explosives operations. The dangers inherent in their work make it necessary for them to use all of their faculties to avoid injury to themselves and their helpers.

Have you reviewed your explosives areas recently and determined what problems may be encountered there? Perhaps years have elapsed since the production facilities were last used. Have decontamination and layaway operations been forgotten? Were proper records maintained on all buildings and equipment to give the information necessary to evaluate the problems you face?

Each job to be undertaken will need special attention. Every safety director should assure himself and his commanding officer that the present procedures for maintenance and reactivation are complete and accurate and that the present needs to prevent injury to personnel or damage to government property are fully covered.

Too many times the significance of planning is forgotten. Only through proper and complete planning of the job that is to be undertaken can we accomplish it without creating or encountering many serious problems. Coordination between engineering, maintenance, production, and safety personnel is essential.

Do you maintain a file of the Abstract Reports issued by the Safety Division, USAMC? There are many reports in the Explosives Series (ES) that are helpful if the recommendations are applied to your situation. These abstracts were written after an accident occurred and the facts were obtained and analyzed. They contain information that can be of great value during planning.

With the increased emphasis on reactivation and production in explosives areas, personnel problems may arise every time a new job is established or employees are transferred to new jobs. Are personnel involved trained to meet their new responsibilities? Even though they have a background of experience, they may need training in all phases of their new job.

New employees will need complete training to acquaint them with the program, their responsibilities for adherence to the established standards, and what to do if emergencies arise. Some may come from jobs where safety may not have been emphasized. Re-evaluation of the existing training program should be made at this time to assure all essential elements are covered.

Management may not always give adequate emphasis to the safety program and its specific functions. Supervision may relax, feeling that all employees should know the standards and know what to do. Inspections have revealed that supervision may have a false sense of security when a standing operating procedure has been approved and published. This is most likely to be true when the operator doing the work has signed a paper to the effect that he has read and understands the standing operating procedure. The employee usually relaxes because he feels that management is remote.

Too often the assigned personnel are inadequately trained in the procedures they must use. They may also possess inadequate technical knowledge of the items being handled. Has every man assigned to our explosives operations successfully passed a locally approved training course? If he has not, we are courting trouble. Explosives operations are no safer - or more efficient - than the safe practices of the most careless or uninformed worker.

Paragraph 1621, AMCR 385-224, outlines general areas of operations involving equipment, machines, buildings, and locations where the standing operating procedure should specifically spotlight the hazards and require that adequate precautionary measures be taken by the assigned maintenance employees. Here are examples:

1. Certain operations require that nonsparking tools be used.

2. Maintenance men shall wear conductive shoes or conductive overshoes with ankle straps when entering buildings in which conductive shoes are required.

3. Maintenance personnel assigned to areas where explosives are processed must be adequately trained in order to be familiar with the types of hazards associated with the operations being conducted.

4. Before repair work is permitted on any equipment that has been exposed to explosives, a tag signed by an operating supervisor shall be placed on the equipment, certifying that all explosives have been removed.

5. Major repairs or changes shall not be undertaken in a hazardous building during regular operations without removal of the dangerous materials, or without the knowledge of the individual in immediate charge of the building.

6. Only competent persons shall be permitted to make repairs.

7. When machines and equipment have been oiled, repaired, or adjusted, all tools used during such work shall be removed.

8. All new and newly repaired process equipment for use in hazardous operations must be examined and actually tested by a specifically designated, competent person to assure that it is in safe working condition before being placed into routine operation.

Individuals responsible for maintenance operations should evaluate every operation to insure that every employee complies with the above requirements, where applicable.

The time to do all this is, first, before the operation is started, and finally, continuously until the operation is completed. The explosion that does occur is proof that somebody failed to do his job completely.

FLASHING FAILED TO PREVENT EXPLOSION

An Army employee was to perform a welding operation to repair a bridge block. The block, used in connection with an explosives operation, was about 9 1/2 inches high by 11 3/4 inches in diameter, and it weighed 111 pounds. There were several holes on the face of the block that had been filled with plugs. These plugs had been screwed into place, welded, and machined until their heads were flush with the face of the block.

Before the welding was started the block was flashed twice to burn off an explosive material that might have remained on it.

The employee proceeded with his welding. After he made several applications of heat from his torch an explosion occurred. A plug that was about 1/8 inch in diameter and 1 1/8 inches deep was propelled away from the block. It struck and penetrated the worker's abdomen. Ten days after the accident he died from his injuries.

Investigating personnel surmised that a small quantity of explosives of a type unknown had been trapped in the hole with the plug. Normal flashing had failed to ignite it. The extreme heat from the welding operation had set it off. The force of the explosion was sufficient to make the plug fly out as a missile.

To prevent any further accident the bridge plate was drilled by remote control. New plugs were inserted in the drilled hole, welded, and machined smooth. A policy was put into effect that all contaminated items containing plugged holes would be similarly processed.

TESTING DEFLECTORS FOR PROPAGATION PREVENTION

Technical personnel of Day & Zimmermann, Inc., operating contractor at Lone Star Army Ammunition Plant, recently developed a dial for an automatic facing machine for the M40A1 burster. To be safe for use, the dial required deflectors that were sufficient to prevent a propagation in the event of a detonation. The available data on the adequacy of the operational shields for this use was not considered to be sufficiently reliable for adaption without further testing. The installation conducted tests in accordance with the provisions of paragraph 2622b, AMCR 385-224, the AMC Safety Manual.

A test dial table was constructed that would simulate the proposed deflector pattern. The deflectors were made of steel plates mounted firmly on a steel table as shown in Photo 1. A steel roller arm was located between the ends of the deflectors. Smaller deflectors were placed at 3 locations underneath the dial.

The dial table was set up inside a wood-lined test structure. Three M40A1 bursters were mounted on the table in positions that simulated their actual loadline locations. The center burster was equipped with an electric blasting cap and .27 pound of Composition C. This provided a 25 percent overload factor.

Photo 2 shows the scene after the center burster was detonated. The steel deflectors and roller arm remained in place and were heavily scored by fragments of the burster. Debris was knocked from the wooden liner of the test structure. The bottom deflector adjacent to the initiated burster was blown off, but the second row of deflectors on the underside of the table remained intact. The explosion did not propagate to the 2 M40A1 bursters that were protected by deflectors.

Day & Zimmermann and Army technical and safety personnel concluded that the deflector pattern arrangement for use on the dial of an automatic facing machine is adequate to prevent propagation of an M40A1 burster detonation.

PHOTO 1

A proposed deflector pattern was simulated by a test table on which two steel plate deflectors and a steel roller arm were mounted. Three M40A1 bursters were mounted in positions that simulated their actual loadline locations. The center burster was equipped with an electric bursting cap and .27 pound of Composition C.

PHOTO 2

Photo 2, made after the center burster was detonated, shows that the deflectors prevented propagation of the explosion to the 2 shielded M40A1 bursters.

Here are ten questions that will test your knowledge of requirements you may meet in dealing with explosives, fire, and industrial hygiene. The answers to all of these may be found in AMCR 385-224, the AMC Safety Manual. How many can you answer without referring to the regulation? The answers and references appear on pages 39 and 40

1. Is odor recommended as a good means of detecting leaking chemical munitions?

   Answer and reference:

2. Is nitroglycerin from exuding dynamite toxic by absorption through the skin?

   Answer and reference:

3. What precautions regarding toxic hazards should be taken when fighting fires that involve liquid propellants?

   Answer and reference:

4. What agency provides industrial hygiene services available to government-owned, government-operated plants?

   Answer and reference:

5. What is the most important measure for controlling atmospheric health hazards?

   Answer and reference:

6. What is the maximum allowable concentration for ethyl ether in the atmosphere?

   Answer and reference:

7. What section in the Safety Manual contains control data on health hazards in TNT handling?

   Answer and reference:

8. Who may determine concentration of atmospheric contamination?

   Answer and reference:

9. How many individual determinations of the concentration of atmospheric contamination at a specific operation are usually considered adequate to arrive at an acceptable value?

   Answer and reference:

10. What reagent is used to detect TNT contamination on protective clothing?

    Answer and reference:

USE OF FILTER MASK FOR OTHER THAN INTENDED USE

During recent industrial hygiene surveys, the U.S. Army Environmental Hygiene Agency noted increased use of the filter mask, FSN 6532-982-7493, at industrial operations. This item is not intended, and has not been approved for use, in industrial operations requiring protection against dusts, mists, fumes, and vapors.

The Federal Supply Catalog lists the mask under the category of surgical supplies with the following description:

> Mask, surgical, non-sterile, cupped, adjustable metal nose piece w/elastic headband, non-woven fabric, disposable.

REFERENCE PUBLICATIONS

AR 10-11, Change 1, 11 August 1966
Organization and Function - United States Army Materiel Command

DA Circular 385-12
Safety - Safe Operation of Truck, Utility, 1/4-Ton, 4x4, M151

DA Circular 385-13
Safety - Safety Educational Materials

DA Pamphlet 750-10, June 1966
Command Maintenance Management Inspection Handbook

AMCR 70-5, Change 1, 27 July 1966
Research and Development - In-Process Reviews of Materiel Development Projects

AMCR 70-13, Change 1, 26 August 1966
Research and Development - Mutual Weapons Development Data Exchange Program (MWDDEP) and Defense Development Exchange Program (DDEP)

AMCR 220-2, 21 July 1966
Field Organizations - Stationing and Support of AMC/CONARC Tenant Units on Host Installations

AMCR 385-18, 2 August 1966
Safety - Aviation Safety and Aircraft Accident Prevention

AMCR 705-17, 18 July 1966
Research and Development of Materiel - Rocket Propellants, Propulsion/Motor Development

AMC Circular 10-27, 11 August 1966
Organization and Functions - Aviation Office

TB 34-9-218, 22 June 1966
Symbol Marking of Aircraft Servicing Points

TB 385-2, 6 June 1966
Nuclear Weapons Fire-Fighting Procedures

TM 3-261, May 1966
Handling and Disposal of Unwanted Radioactive Material

SL 47-66 Supply Letter, AVCOM, 11 July 1966
For All Aircraft Accident Investigation Boards and Aviation Safety Officers

THIRTY WAYS TO GET HURT IN AN OFFICE

Safety Office
Aberdeen Proving Ground

Many people have the feeling that an office is an ultra-safe place in which to work. What is there in an office short of falling down a flight of stairs, that can hurt a person?

Recently we reviewed a number of safety inspection reports that covered offices. We came up with the following list of items which had been written up. It should be interesting - and beneficial - to have each of your office supervisors check this list to see how many of these hazards exist in the areas they supervise. A potential for an injury exists in each of these unsafe conditions!

1. Typewriter not secured to the desk.

2. Desk chair with worn or broken casters (poor foundation).

3. Open desk drawers (tripping and bumping hazard).

4. File cabinets not firmly secured.

5. Heavy material stored in the top drawer of the file cabinet (tilting hazard).

6. Open file drawers (tripping and bumping hazard).

7. Obstructions in the aisle or walkway (tripping hazard).

8. Telephone cord across floor and not enclosed (tripping hazard).

9. Adding machine cord adrift on the floor (tripping and ankle turning hazard).

10. Cords for electrical office machines and desk lights frayed, showing bare wires, spliced and taped, or otherwise indicating "do-it-yourself" repairs.

11. Loose and broken electrical receptacles and plugs (shock and fire hazard).

12. Empty soft drink bottles on desks, tables, window sills, and floors (cutting hazard if accidentally broken).

13. Razor blade in pin or paper clip container.

14. Pencils - with points up - in a drinking glass (puncture wound hazard).

15. Cracked glass desk tops and tops with chipped edges.

16. Makeshift ashtrays near wastebaskets (fire hazard).

17. Stenographers chairs with improperly secured backs.

18. Sharp-edged metal fasteners on file folders.

19. Sharp-pointed scissors or shears, without protective covers in desk drawers.

20. Splintered and rough edges on wooden furniture.

21. Sharp edges on filing cabinet drawers or accessories.

22. Loose fans, lights, or other overhead fixtures.

23. Office machines too near the edge of the desk or table.

24. Bookcases not uniform, and unstable with no means of properly securing.

25. Broken or improperly operating office equipment.

26. Unauthorized and hazardous hot-plate or coffee maker arrangements.

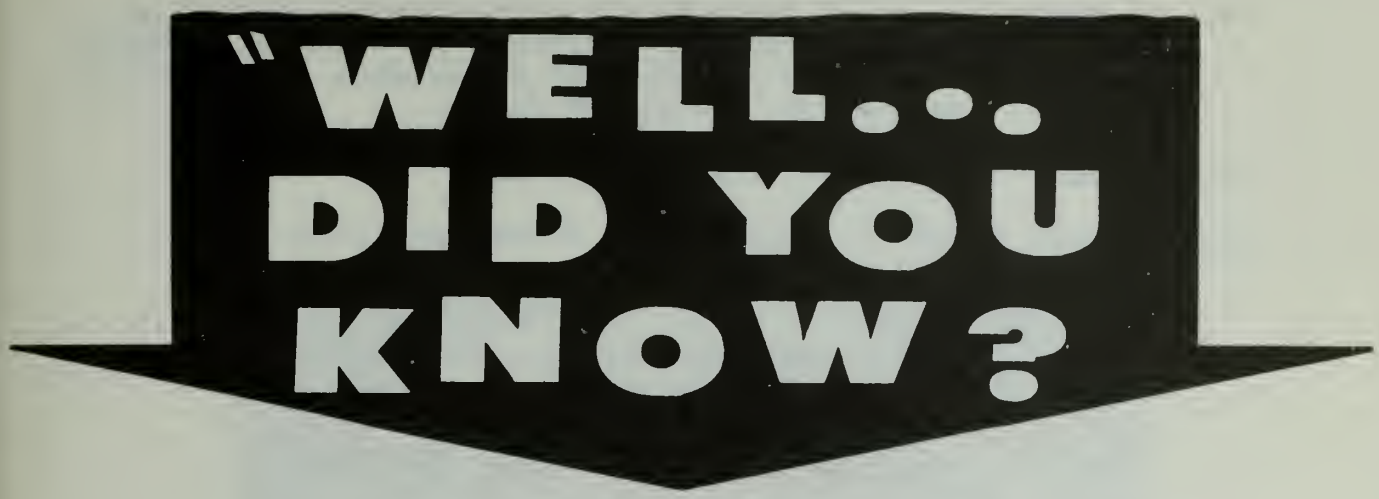
27. Protruding objects and sharp corners (bumping hazard).

28. Catching fingers in file or desk drawers.

29. Throwing paper clips or shooting rubber bands (horseplay).

30. Absentmindedness during paper-cutting operations.

This list of office hazards is taken from the reports of safety inspections made by safety personnel. Some of them may be existing in your offices. Inspection may turn up still others not on this list. The action to be taken if any hazards are found is the standard procedure for such a situation -- correct them.



Here are the answers to the questions on pages 34 and 35 . All questions were based on information contained in AMCR 385-224. A reference to the pertinent paragraph follows each answer:

1. No. Odors are not the best means of detecting leaking chemical agents. Odors are not always easily detected, and some gases are almost odorless. The latest vesicant detector paints, detector paper, detector crayon, and chemical agent detector kit should be used. Reference: Paragraph 2902.

2. Yes. Nitroglycerin in production processes, as well as from exuding dynamite, is toxic by absorption. Skin contact should be avoided. Reference: Paragraph 2730e.

3. Fire should be fought from the upwind side. Firefighters should wear full protective clothing and self-contained breathing apparatus of an approved type. Reference: Paragraph 1231a.

4. U.S. Army Environmental Hygiene Agency. Reference: Paragraph 1109.

5. A properly designed local exhaust ventilating system is the most important measure that is used to control atmospheric contamination in the work space. Reference: Paragraph 1111b.

6. 400 parts per million in air for an 8-hour workday. Reference: Table 1117.

7. Section 11, Table 1111.

8. A determination of atmospheric contamination should be made by a person technically trained in a suitable field who has had specific training or experience in industrial hygiene. Reference: Paragraph 1110b.

9. Three. Reference: Paragraph 1110b.

10. Webster reagent. Reference: Paragraph 1103c.

NEW CUMBERLAND ARMY DEPOT ACHIEVES INJURY - FREE RECORD.

At the end of FY 1966 New Cumberland Army Depot had achieved 6,901,229 manhours without a disabling injury. The record began in August 1964 and remained unbroken 22 months later at the end of FY 1966 when the photo above was made. Colonel Victor L. Cary, NCAD Commanding Officer, is shown presenting a National Safety Council Award of Honor to Norman Smith, Safety Director, in recognition of the achievement. The display (showing the manhours worked without a disabling injury) is held by receptionist Darcy Pfoutz.

UNITED STATES ARMY MATERIEL COMMAND

WASHINGTON, D.C.

20315

UNIVERSITY OF FLORIDA
3 1262 09304 9384

FRONT COVER:

FLARE

Lieutenant Charles Q. Williams

MEDAL OF HONOR WINNER

LT WILLIAMS enlisted in the U. S. Army in 1953, attended the Basic Airborne Course and Officer Candidate School at Fort Benning, Georgia, graduating in May 1964. He attended the Special Forces Officer's Course at the Special Warfare School, Fort Bragg, North Carolina. He was Executive Officer of Special Forces "A" Detachment, 5th Special Forces Group (Airborne), Vietnam from February to June 1965 He is presently with the Office of the Chief, Special Forces Procurement and Reenlistment Division, Office Chief of Staff, G 1, Headquarters, U. S. Army John F. Kennedy Center for Special Warfare, Fort Bragg, North Carolina.